PB81-120578

Source Test Data (SOTDAT) System Information

(U.S.) Environmental Protection Agency
Research Triangle Park, NC

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NTIS.

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Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

EPA-450/4-80-025
November 1980

Air

PB81-120578

EPA

SOTDAT
Source Test Data System Information

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16. ABSTRACT

The Source Test Data (SOTDAT) System is an automated data processing system used by the U.S. Environmental Protection Agency to store data from testing and analysis of emissions from stationary sources of air pollution.

This booklet is designed for persons who are not familiar with SOTDAT, to provide a description of the system and examples of the computerized SOTDAT reports that are available upon request. To meet these objectives, this booklet includes: (1) an overview of the data contained in SOTDAT, (2) descriptions of related publications, (3) a description of procedures for requesting SOTDAT data and (4) a description of SOTDAT report capabilities and examples of available computerized report formats. A list of additional references is provided for background information.

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SOTDAT AEROS NEDS NADB emissions		

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SOTDAT
Source Test Data System Information

National Air Data Branch
Monitoring and Data Analysis Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

November 1980

This report is issued by the Environmental Protection Agency to report technical data of interest to a limited number of readers. Copies are available from the Request and Information Section, National Air Data Branch (MD-14) [Commercial telephone (919)541-5395; FTS 629-5395] or the Library Services Office (MD-35) [Commercial telephone (919)541-2777; FTS 629-2777], U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

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CONTENTS

	Page
List of Figures	4
Introduction	5
Overview of the Source Test Data System	6
Publications Related to Source Test Data	15
Procedure for Requesting Computerized Reports	16
SOTDAT Computerized Reports	18
Select/Sort Capability	19
Standard SOTDAT Report	21
Abbreviated SOTDAT Report	29
Emission Factor Report	31
Additional References	33

LIST OF FIGURES

Figure		Page
1	SOTDAT Data Form	8
2	SOTDAT Select/Sort Keys	20
3	Standard SOTDAT Report: Typical Source Test	22
4	Standard SOTDAT Report: Trace Element Analysis ...	24
5	Standard SOTDAT Report: Particle Size Test	26
6	Abbreviated SOTDAT Report	30
7	SOTDAT Emission Factor Report	32

Introduction

The Source Test Data (SOTDAT) System is an automated data processing system used by the U.S. Environmental Protection Agency to store data from testing and analysis of emissions from stationary sources of air pollution. SOTDAT is a part of the comprehensive Aerometric and Emissions Reporting System (AEROS), described in detail in a booklet, "Aerometric and Emissions Reporting System," which is available on request.

Source test data are collected on an ongoing basis by the National Air Data Branch (NADB), Monitoring and Data Analysis Division, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. EPA Order 7600.2A requires submission of coded SOTDAT Forms for all source tests conducted by EPA and its contractors. Other sources include state and local air pollution control agencies, control equipment manufacturers, engineering consultants and installations identified through the National Emissions Data System (NEDS). Coded forms are inspected manually by NADB personnel prior to keypunching, computerized editing and verification, and storage on the Univac 1110 computer at EPA's National Computer Center at Research Triangle Park, North Carolina.

This booklet is designed for persons who are not familiar with SOTDAT, to provide a description of the system and examples of the computerized SOTDAT reports that are available upon request. To meet these objectives, this booklet includes: (1) an overview of the data contained in SOTDAT, (2) descriptions of related publications, (3) a description of procedures for requesting SOTDAT data and (4) a description of SOTDAT report capabilities and examples of available computerized report formats. A list of additional references is provided for background information.

Overview of the Source Test Data System

General Description

The Source Test Data (SOTDAT) System is a computerized data handling system that accepts, stores and reports information from emissions tests performed on sources of air pollution. The system contains data on many different pollutants, but the largest volume of data is for the five original EPA "criteria" pollutants (particulates, sulfur dioxide, carbon monoxide, nitrogen oxides and hydrocarbons). Special capabilities for storage of results of trace element analyses and particle sizing tests were added as part of a general system enhancement in 1979.

Purposes

The primary purpose of SOTDAT is to make use of source test data in the development and revision of air pollutant emission factors. Empirical models can be used to predict emission factors and their characteristics for specific kinds of sources, based on SOTDAT emission, process, and fuel parameters reported from tests on such specific sources. These emission factors are essential components of other AEROS systems such as the National Emissions Data System (NEDS), in which they are used to estimate process emissions if actual measurements are not available. They are published for use by EPA and other groups in the Compilation of Air Pollutant Emission Factors (AP-42).

Additional possible applications of SOTDAT data include technical evaluation of process emissions and control equipment, prediction of control method costs, coordination of enforcement and surveillance activities, and planning and evaluation of source tests.

SOTDAT Organization and Content

The basic unit of organization in SOTDAT is the individual "source test," or sampling run. All information on a SOTDAT coding form, computerized data record or SOTDAT report pertains to a single sampling run (i.e., to the same sampling site and time period). Thus data from a typical source test report are entered into SOTDAT as the results of a number of sampling runs.

The data items in SOTDAT have been selected, defined and arranged so that sufficient information on each source test may be obtained to allow evaluation of each source test's applicability to a SOTDAT user's purpose, and to present that information in a logical format for both coder and user. Data items are grouped in various categories, which are maintained in the SOTDAT coding form, data record and computer outputs. These groups and individual data items are discussed under SOTDAT Data Form, below.

To assure usefulness of SOTDAT data for the main purposes of the system, test reports entered into SOTDAT have been required to include either uncontrolled or pre-control device tests or post-control device tests with substantial documentation of actual control device operation and efficiency. Data are not accepted from a number of test types, including tests involving experimental, developmental or obsolete processes, or testing methods, permanently-installed continuous in-stack monitors, compliance tests conducted for enforcement purposes, tests conducted under atypical or unusual conditions, and tests on most sources other than conventional stationary sources (e.g., mobile sources or fugitive emissions).

SOTDAT Data Form

Data for each source test to be entered into SOTDAT are recorded on the SOTDAT Data Form (Fig. 1). It has special sections designed specifically for results of trace element analysis and particle sizing. The first three pages of the form are used for all test types. The third page also accommodates trace element analysis results. The fourth and fifth pages provide space for additional sampling and results data related to particle size tests. The list below provides a description of the basic data groups used in the SOTDAT Data Form and maintained through the computerized data record and the SOTDAT Report format:

Card A. Source Identification: Includes the name and address of the plant where the test was performed and its NEDS geographic codes and plant and point (process) identification numbers.

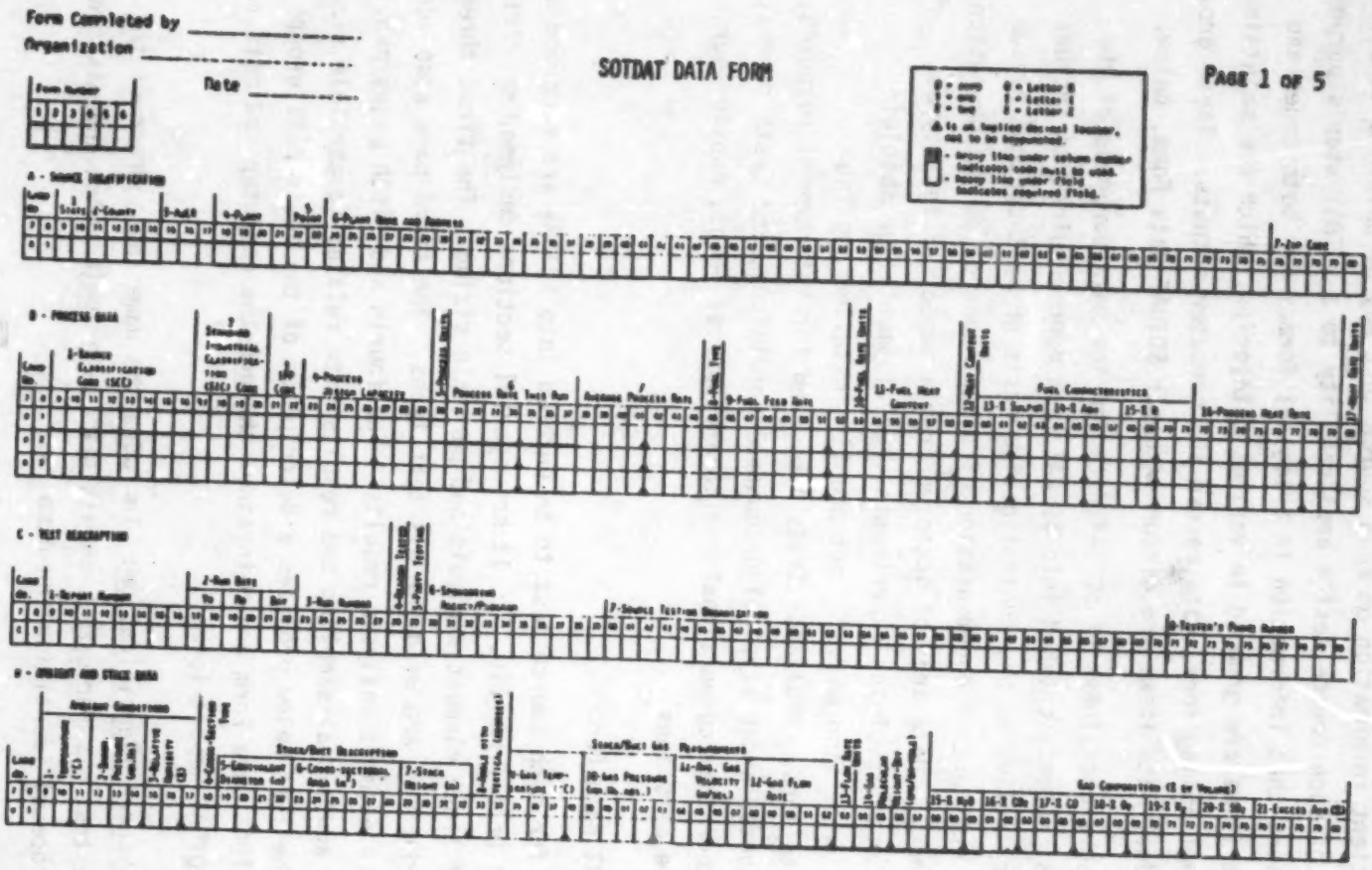


Figure 1. SOTDAT Data Form

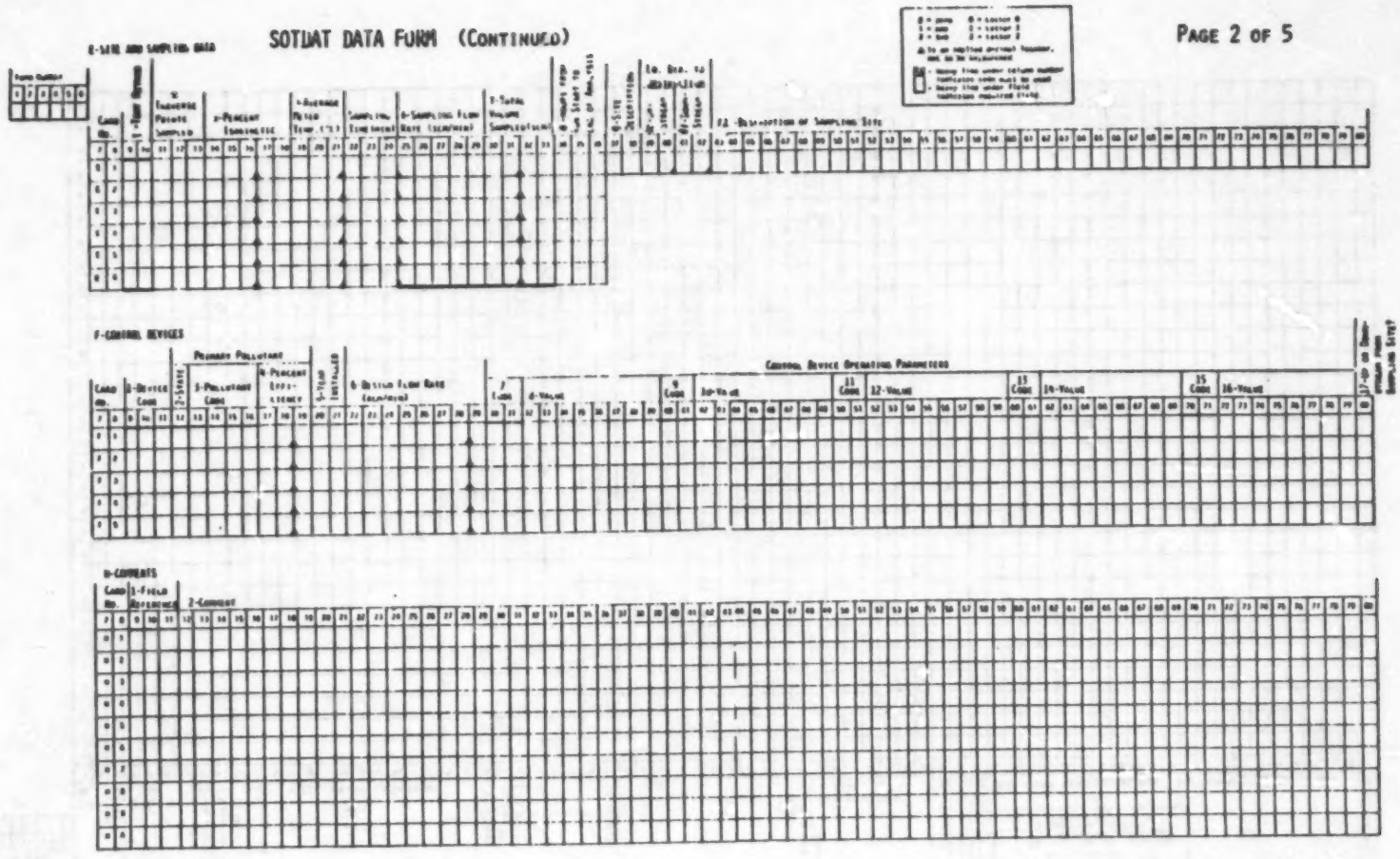


Figure 1. SOTDAT Data Form (continued)

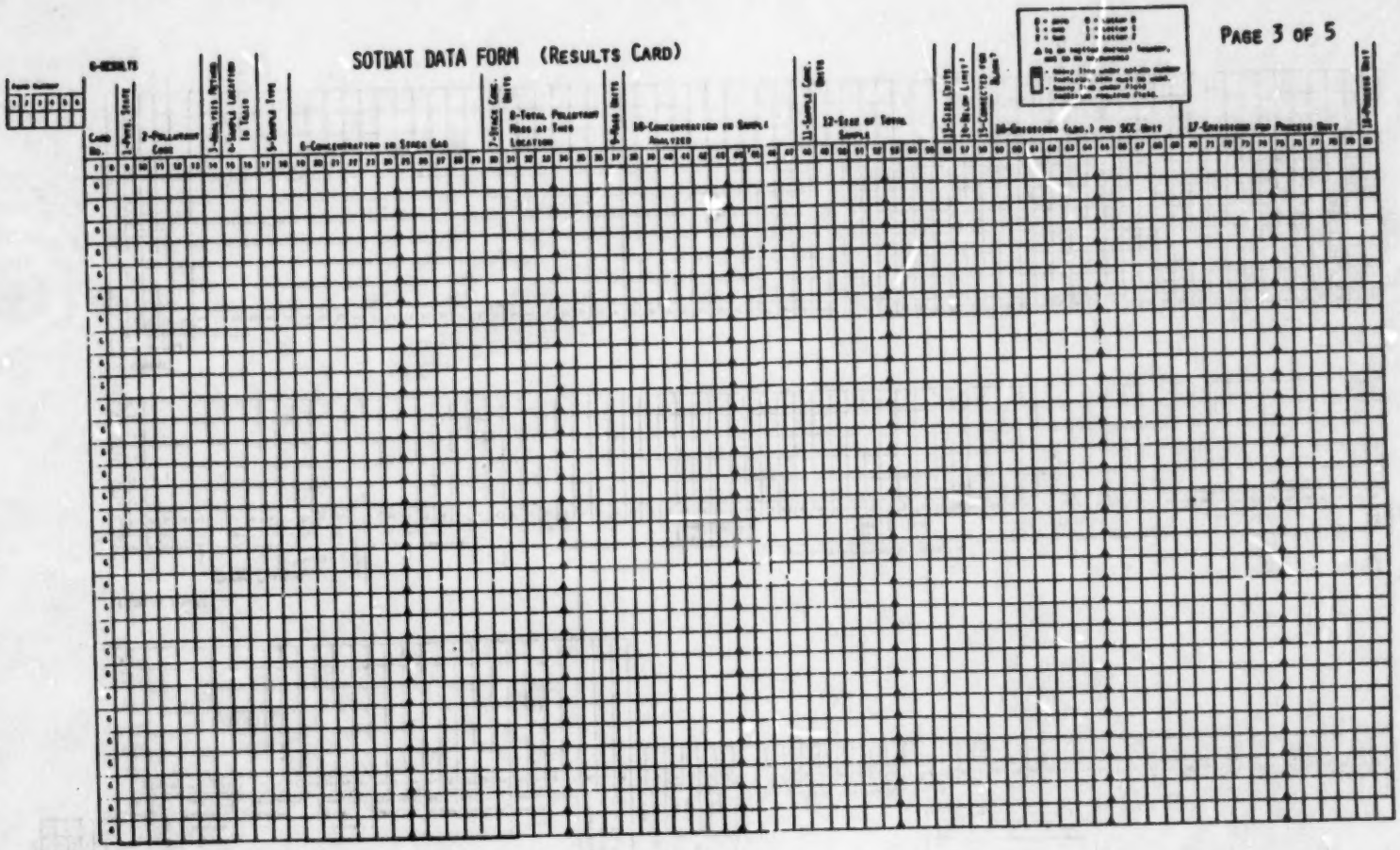


Figure 1. SOTDAT Data Form (continued)

SOTDAT DATA FORM (PARTICLE SIZE SAMPLING DATA)

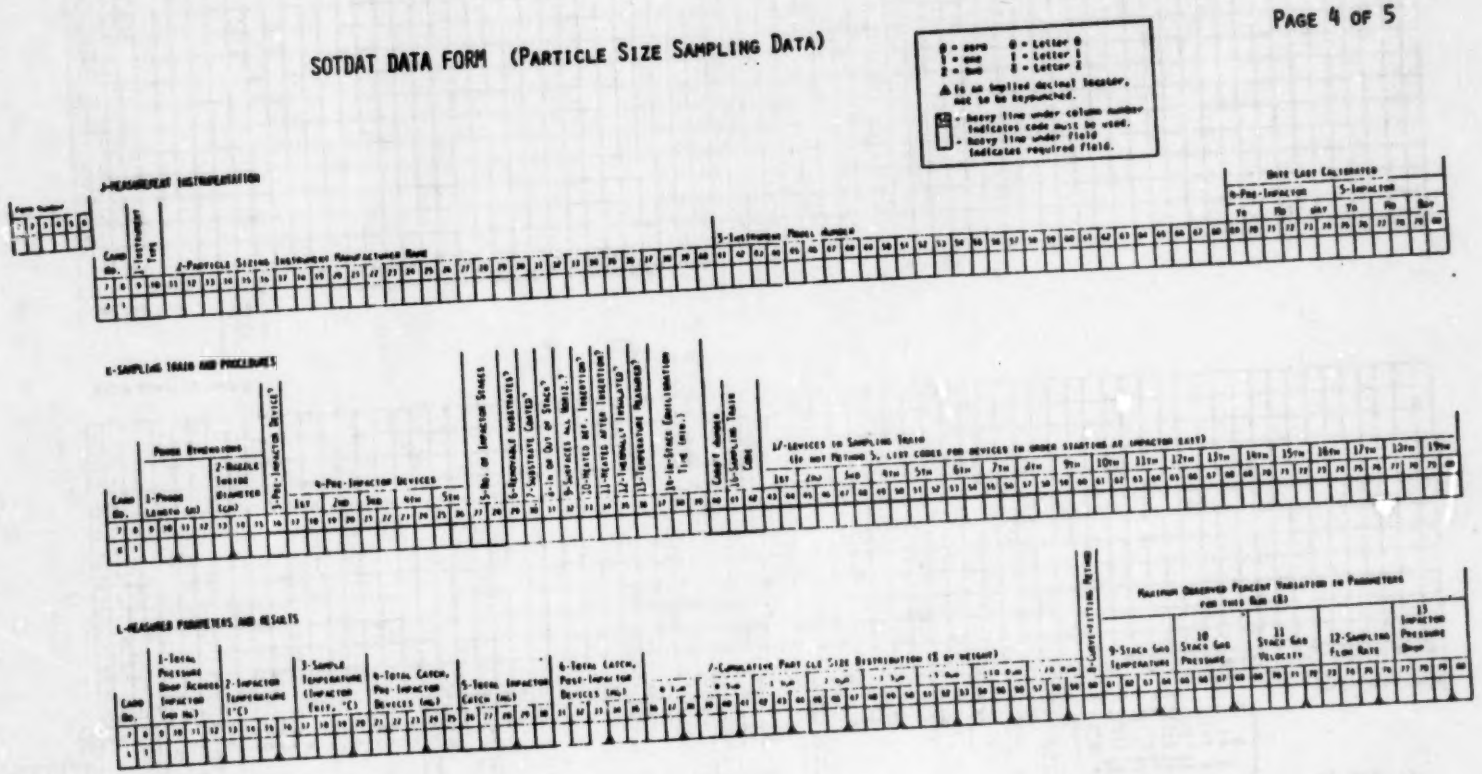


Figure 1. SOTDAT Data Form (continued)

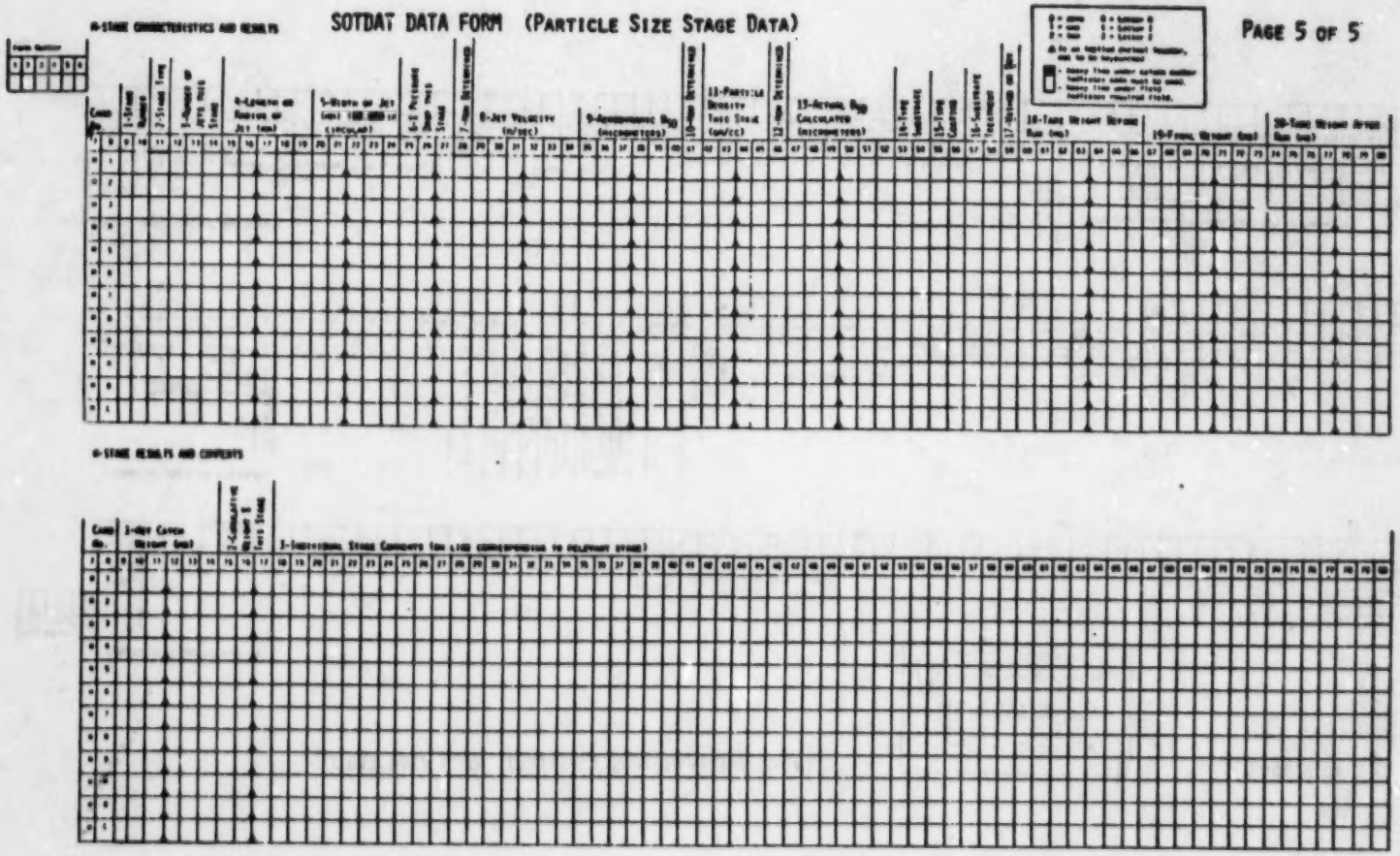


Figure 1. SOTDAT Data Form (continued)

Card B. Process Data: Includes all information on the process being sampled, such as the appropriate Source Classification Code (SCC), Standard Industrial Classification (SIC), Implementation Planning Program (IPP) Process Code, design, average and sampling-period process rates, data on fuel feed rate, heat content, composition, and process heat rate. Space is provided for up to three entries in each field to allow for the input of multiple process descriptions and data on multiple fuels.

Card C. Test Description: Includes general descriptive information on the test--test report number, run number, date, reason, identification of the sponsoring agency, and testing organization.

Card D. Ambient and Stack Data: Includes ambient meteorological data, stack geometry data, and stack gas measurements and composition.

Card E. Sampling and Site Data: Includes test method, number of sampling traverse points, and other sampling details (such as flow rate and volume sampled), as well as fields describing the sampling site. The sampling data can be repeated as many as six times to accommodate data on multiple samples taken in a single test run.

Card F. Control Devices: Includes identification, location, design efficiency and flow rate, pollutant controlled, and up to five other operating parameters for control devices in the sample stream. Operating parameters are selected from lists for various types of control devices. Multiple cards can be used for data on up to five control devices.

Card G. Results: Includes the pollutant, analysis method, sample description, stack gas concentration, and emission factors (based on SCC or other process units), as well as pollutant mass, sample concentration, sample size, and other data for reporting of trace element analyses. (Note that Card G has been placed on Page 3 of the Form, to allow for multiple pollutants or trace elements.)

Card H. Comments: Provides space for comments on individual data fields (using the field number) or general comments related to any aspect of the test. A total of 10 comments are allowed, each on a separate card.

(No Card I is used.)

Card J. Measurement Instrumentation: Includes the type, manufacturer, model, and calibration dates for the instrument used in particle size tests.

Card K. Sampling Train and Procedures: Describes the particle size sampling train (probe, preimpactor devices, impactor stages, and following devices) and defines some of the critical techniques used in the sampling procedure.

Card L. Measured Parameters and Results: Includes averages and percent variation observed in a number of sampling and stack parameters, total catches of the impactor and preimpactor and postimpactor devices, and a standardized cumulative particle size distribution.

Card M. Stage Characteristics and Results: Includes, for each of up to 12 stages or other sizing devices, a number of design and operating parameters (type, jet number, dimensions, and velocity, pressure drop, aerodynamic and actual D_{50}, particle density, substrate, coating and treatment) and tare and final weights.

Card N. Stage Results and Comments: Includes the net catch weight, cumulative weight percent, and any comments for each stage.

Publications Related to Source Test Data

The publications described below may be of interest to persons concerned with source tests and emissions data. There are no periodic publications of SOTDAT data such as those available for the emissions and air quality data in NEDS and SAROAD.

Compilation of Air Pollutant Emission Factors (AP-42)

This volume contains emission factors (emissions per process unit) for most of the common emission categories: fuel combustion by stationary and mobile sources; combustion of solid wastes; evaporation of fuels, solvents and other volatile substances; various industrial processes; and miscellaneous sources. Compiled for use in air pollution emission inventories, these emission factors are based on source test data, material balance studies and engineering estimates. Emission factors are only available for the primary pollutants (particulates, CO, SO_2, NO_x, and hydrocarbons). There are many instances in which a need for information on emissions from various source types can be fulfilled by reference to this volume.

Source Test Data System (SOTDAT) Coding Manual

The SOTDAT Coding Manual is the basic reference document for persons entering data into SOTDAT. It includes general coding rules, full instructions and specifications for each individual data item, and other information for SOTDAT data input. The SOTDAT user may find access to this information necessary for detailed interpretation and analysis of data retrieved from the system. The Coding Manual also includes some specific guidance on its recommended use in becoming familiar with SOTDAT and interpreting SOTDAT reports. Users of SOTDAT data are encouraged to obtain the manual and to refer to it to be sure that relevant definitions and specifications correspond with their own.

The above publications may be requested from:

Library Services Office (MD-35)
Office of Administration
U.S. Environmental Protection Agency
Research Triangle Park NC 27711

FTS: 629-2777
Commercial: (919)541-2777

Procedure for Requesting Computerized Reports

The computerized reports described in the next section may be requested from:

Requests and Information Section (MD-14)
National Air Data Branch
U.S. Environmental Protection Agency
Research Triangle Park NC 27711

FTS: 629-5395
Commercial: (919)541-5395

All requests except those received from within EPA or from other Federal agencies will be processed in accordance with the Freedom of Information Act. In order for a request to be evaluated and processed, the request must be made in a letter; however, before submitting the letter, a telephone call to NADB is recommended to assure the feasibility of a desired type of retrieval and otherwise clarify or expedite the request.

When requesting by letter, the following items must be specified:

1) Computerized report name, or if none specifically applies, the data items required.
2) Desired select and sort options (see next section for details).
3) Name of person to contact in case of questions, and telephone number.
4) Any time constraints involved.
5) Authorization to assume costs of providing the requested data.

Requests for computerized reports can often be filled within two weeks. If a request is likely to take longer, the requestor will be notified.

As a Federal agency, EPA normally makes no charge for reports requested by other Federal agencies; however, if a request is of major impact on NADB's computer budget, NADB may request that user and account codes be established by way of interagency agreements.

Many AEROS users are non-Federal, and typically include state and local air pollution control agencies, universities, contractors, private industry, consultants and private citizens. For non-Federal users other than state

and local air pollution control agencies, a charge may be necessary to cover the costs of retrieving and printing the requested data; if so, the requestor will be notified before any cost is incurred. This booklet cannot give estimates of specific costs due to the variety of possible requests.

SOTDAT Computerized Reports

Three report formats and a selection and sort capability are available to SOTDAT users, as described in detail below. The Standard SOTDAT Report contains all information for a specific test run. The Abbreviated Report is a subset of the Standard Report, including the unique SOTDAT Form Number, identification of the plant tested, names of parties sponsoring and performing the test, pollutants for which results were obtained and other identifying items. The Emission Factor Report calculates and displays estimated emission factors and related statistics for groups of test runs specified by the SOTDAT user. The select/sort capability allows the user to select all test runs in the data base with desired values or ranges of values for specific data items, to sort the selected runs according to the values of one or more data items and to print the selected and sorted test results in any of the above report formats.

Select/Sort Capability

The SOTDAT select/sort capability allows the user to select SOTDAT test runs containing specific data values or ranges of values and to specify data items by which a selected group of test runs should be sorted prior to printing in one of the SOTDAT report formats. Only certain data items can be used as selection and sort criteria, as listed in Figure 2.

Through the choice of appropriate selection criteria, SOTDAT retrievals can be limited to test runs containing information likely to be of interest to the user. Tests conducted at specific plants can be obtained by requesting only those test runs with desired NEDS plant identification numbers. Tests of all processes of given types can be obtained by specifying the relevant Source Classification Codes. Maximum and/or minimum criteria can be used to specify retrieval of groups of tests with related selection criteria, such as those tests with similar SOTDAT form numbers, run dates, test or analysis methods, etc. Up to 20 selection criteria can be used simultaneously to define the subset of SOTDAT desired. Each selection can consist of an equality, maximum or minimum or both maximum and minimum values for one of the criteria in Figure 2.

Selected test runs can be sorted by any combination of the select/sort keys, in user-specified order. All 24 keys can theoretically be used at one time. Typical retrievals will involve only two or three keys, however, since each successive sort key operates only on test runs with identical values for all previous keys. Since SOTDAT Form Numbers are unique, sort keys to be used after the Form Number will have no effect.

It is recommended that the Abbreviated SOTDAT Report be requested by users who are unsure of the number of test runs which may result from a desired set of selection criteria, to avoid unnecessary printing of large numbers of the Standard Report. Examination of the selected Abbreviated Reports should be sufficient to specify, by direct use of SOTDAT Form Numbers or other revised selection keys, those test runs for which the full Standard Report is of interest.

Figure 2. SOTDAT SELECT/SORT KEYS

Pollutant
Test method

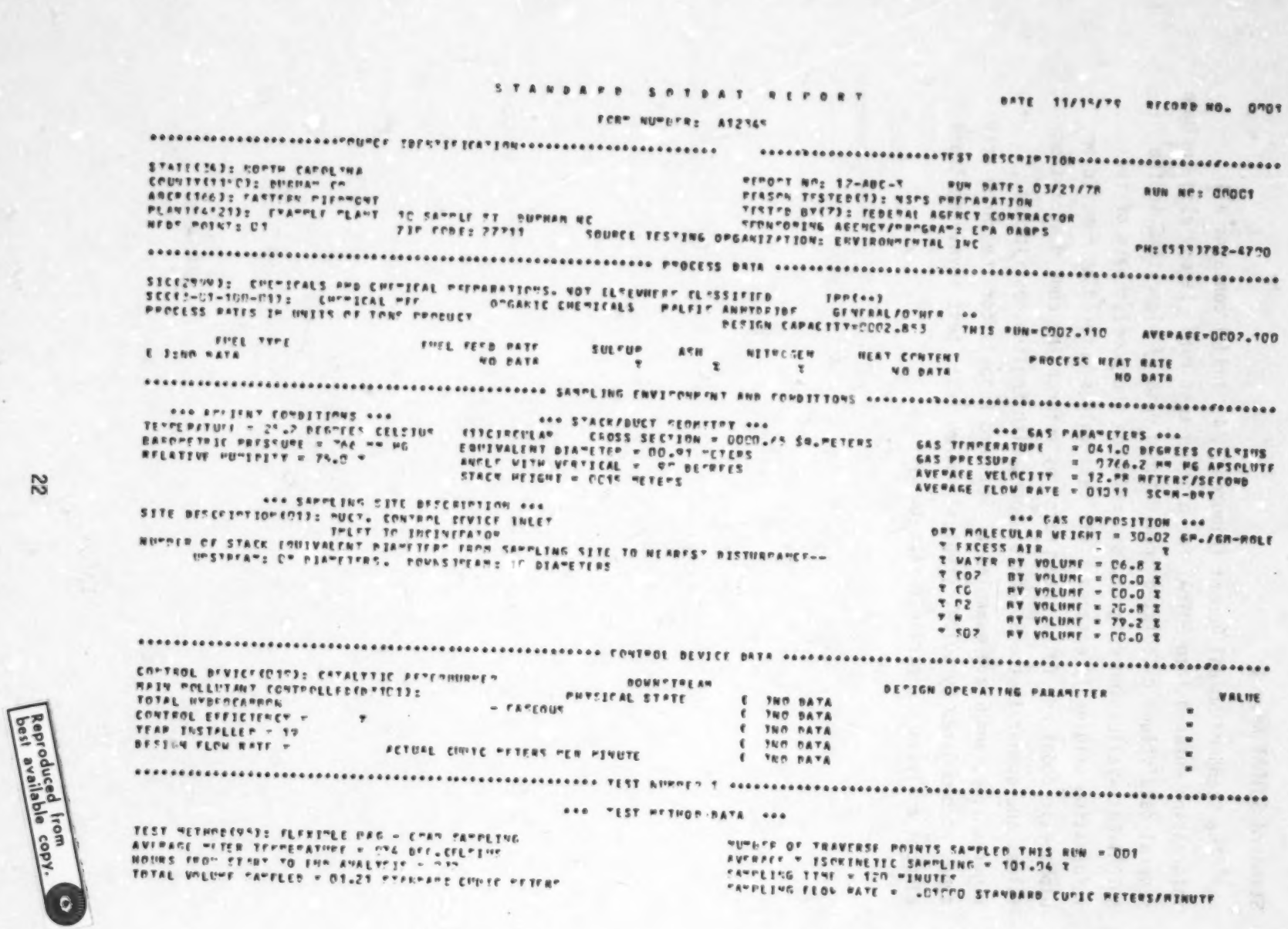
Source Classification Code
Standard Industrial Classification Code

Run date
Reason tested
Party testing
Fuel type
Particle sizing device
Analysis method
Sampling position
Control device

SOTDAT Form Number
State
County
Air Quality Control Region
NEDS plant identification number
NEDS point identification number

Standard SOTDAT Report

The Standard SOTDAT Report (Figures 3, 4, and 5) contains all information entered into SOTDAT for a given test run. It may also include several data values calculated from entered data by algorithms in the SOTDAT Edit-Validation Program, depending on the completeness of the information originally entered. All data values entered as numeric or alphabetic codes are fully interpreted by referencing code description files, and appear in the Standard Report with English descriptors. Figures 3, 4, and 5 are examples of Standard Reports for the three test types accommodated by SOTDAT (typical source test, test involving trace element analysis and particle size test).



```
                                S T A N D A R D   S O T D A T   R E P O R T                    DATE  11/19/79   RECORD NO.  0001

                                        FOR NUMBER:  A12345

*************************SOURCE IDENTIFICATION*************************      ***********************TEST DESCRIPTION***********************

STATE(34): NORTH CAROLINA                                                  REPORT NO: 17-ABC-7      RUN DATE: 03/21/78      RUN NO: 00001
COUNTY(11*C): DURHAM CO                                                    PERSON TESTED(1): NSPS PREPARATION
AQCR(166): PIEDMONT                                                        TESTED BY(7): FEDERAL AGENCY CONTRACTOR
PLANT(*21): EXAMPLE PLANT  TC SAMPLE PT  DURHAM NC                         SPONSORING AGENCY/PROGRAM: EPA OAQPS
NEDS POINT: 01                ZIP CODE: 27711        SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC                    PH:(919)782-4700

************************************************************ PROCESS DATA ************************************************************

SIC(2999): CHEMICALS AND CHEMICAL PREPARATIONS, NOT ELSEWHERE CLASSIFIED       IPP(**)
SCC(3-01-100-01):  CHEMICAL MFG          ORGANIC CHEMICALS    PHTHALIC ANHYDRIDE    GENERAL/OTHER  **
PROCESS RATES IN UNITS OF TONS PRODUCT                                  DESIGN CAPACITY=0002.853    THIS RUN=0002.110    AVERAGE=0002.100

        FUEL TYPE                    FUEL FEED RATE      SULFUR      ASH      NITROGEN      HEAT CONTENT          PROCESS HEAT RATE
E )=NO DATA                             NO DATA            %          %          %            NO DATA                NO DATA

************************************************** SAMPLING ENVIRONMENT AND CONDITIONS **************************************************

   *** AMBIENT CONDITIONS ***          *** STACK/DUCT GEOMETRY ***                    *** GAS PARAMETERS ***
TEMPERATURE = 25.0 DEGREES CELSIUS   (1)=CIRCULAR    CROSS SECTION = 0000.45 SQ.METERS    GAS TEMPERATURE    = 041.0 DEGREES CELSIUS
BAROMETRIC PRESSURE = 760 MM HG      EQUIVALENT DIAMETER = 00.97 METERS                   GAS PRESSURE       = 0766.2 MM HG ABSOLUTE
RELATIVE HUMIDITY = 75.0 %           ANGLE WITH VERTICAL = 00 DEGREES                     AVERAGE VELOCITY   = 12.88 METERS/SECOND
                                     STACK HEIGHT = 0015 METERS                           AVERAGE FLOW RATE = 01311  SCMM-DRY

          *** SAMPLING SITE DESCRIPTION ***                                                    *** GAS COMPOSITION ***
SITE DESCRIPTION(011): DUCT, CONTROL DEVICE INLET                                    DRY MOLECULAR WEIGHT = 30.02 GM./GM-MOLE
                       INLET TO INCINERATOR                                           % EXCESS AIR          -          %
NUMBER OF STACK EQUIVALENT DIAMETERS FROM SAMPLING SITE TO NEAREST DISTURBANCE--      % WATER BY VOLUME = 06.8 %
     UPSTREAM: 00 DIAMETERS.  DOWNSTREAM: 10 DIAMETERS                               % CO2   BY VOLUME = 00.0 %
                                                                                     % CO    BY VOLUME = 00.0 %
                                                                                     % O2    BY VOLUME = 20.8 %
                                                                                     % N     BY VOLUME = 79.2 %
                                                                                     % SO2   BY VOLUME = 00.0 %

************************************************** CONTROL DEVICE DATA **************************************************

CONTROL DEVICE(010): CATALYTIC INCINERATOR                    DOWNSTREAM
MAIN POLLUTANT CONTROLLED(0*1C1):          PHYSICAL STATE     DESIGN OPERATING PARAMETER                    VALUE
TOTAL HYDROCARBON                  - GASEOUS                  ( )NO DATA                                      =
CONTROL EFFICIENCY =       %       ( )NO DATA                                      =
YEAR INSTALLED = 19                ( )NO DATA                                      =
DESIGN FLOW RATE =          ACTUAL CUBIC METERS PER MINUTE    ( )NO DATA                                      =
                                                              ( )NO DATA                                      =

************************************************** TEST NUMBER 1 **************************************************

                                        *** TEST METHOD DATA ***

TEST METHOD(99): FLEXIBLE BAG - GRAB SAMPLING                 NUMBER OF TRAVERSE POINTS SAMPLED THIS RUN = 001
AVERAGE METER TEMPERATURE = 094 DEGREES CELSIUS               AVERAGE % ISOKINETIC SAMPLING = 101.04 %
HOURS FROM START TO END ANALYSIS = 000                        SAMPLING TIME = 120 MINUTES
TOTAL VOLUME SAMPLED = 01.21 STANDARD CUBIC METERS            SAMPLING FLOW RATE = .01000 STANDARD CUBIC METERS/MINUTE
```

Figure 3. Standard SOTDAT Report: Typical Source Test

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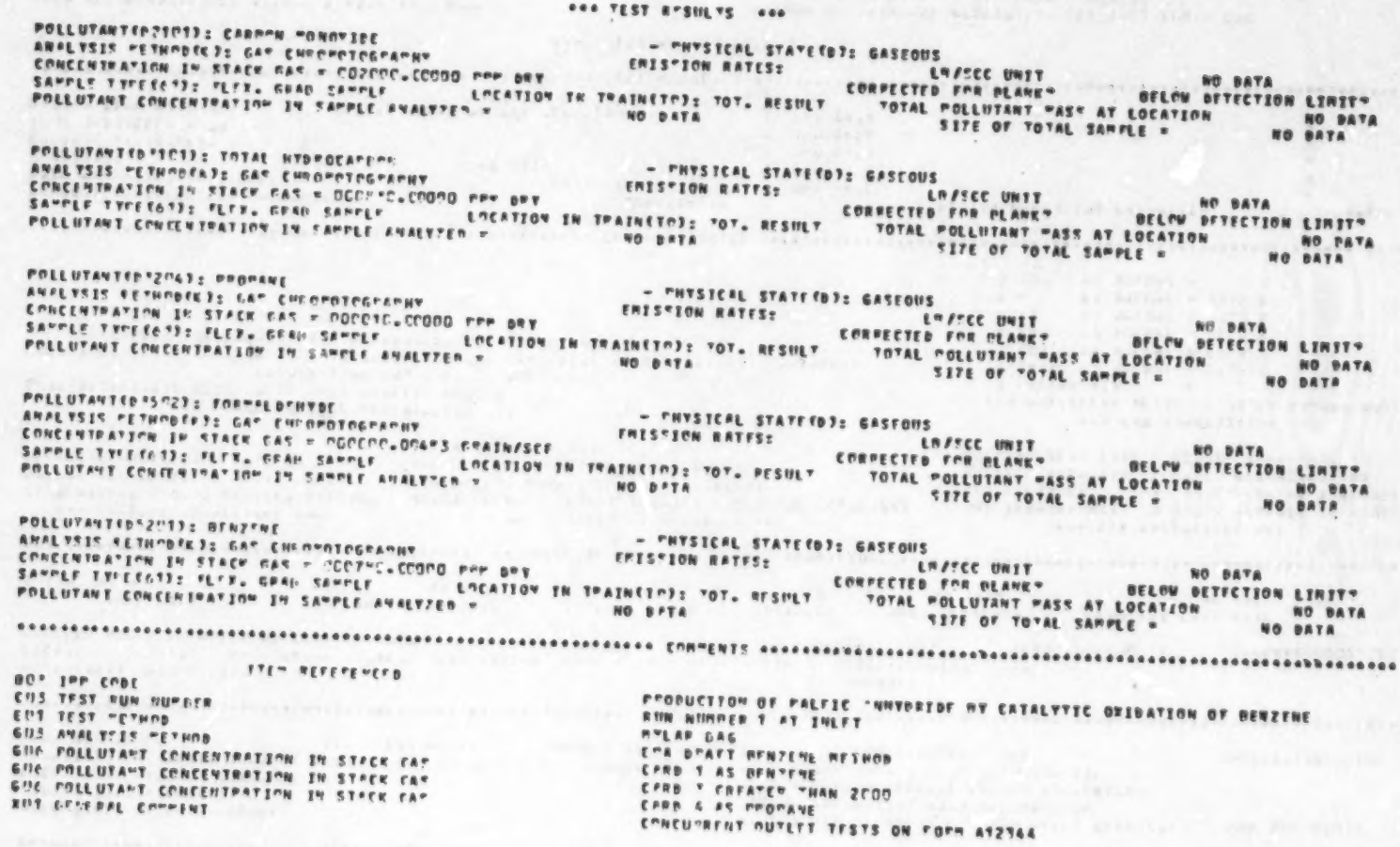
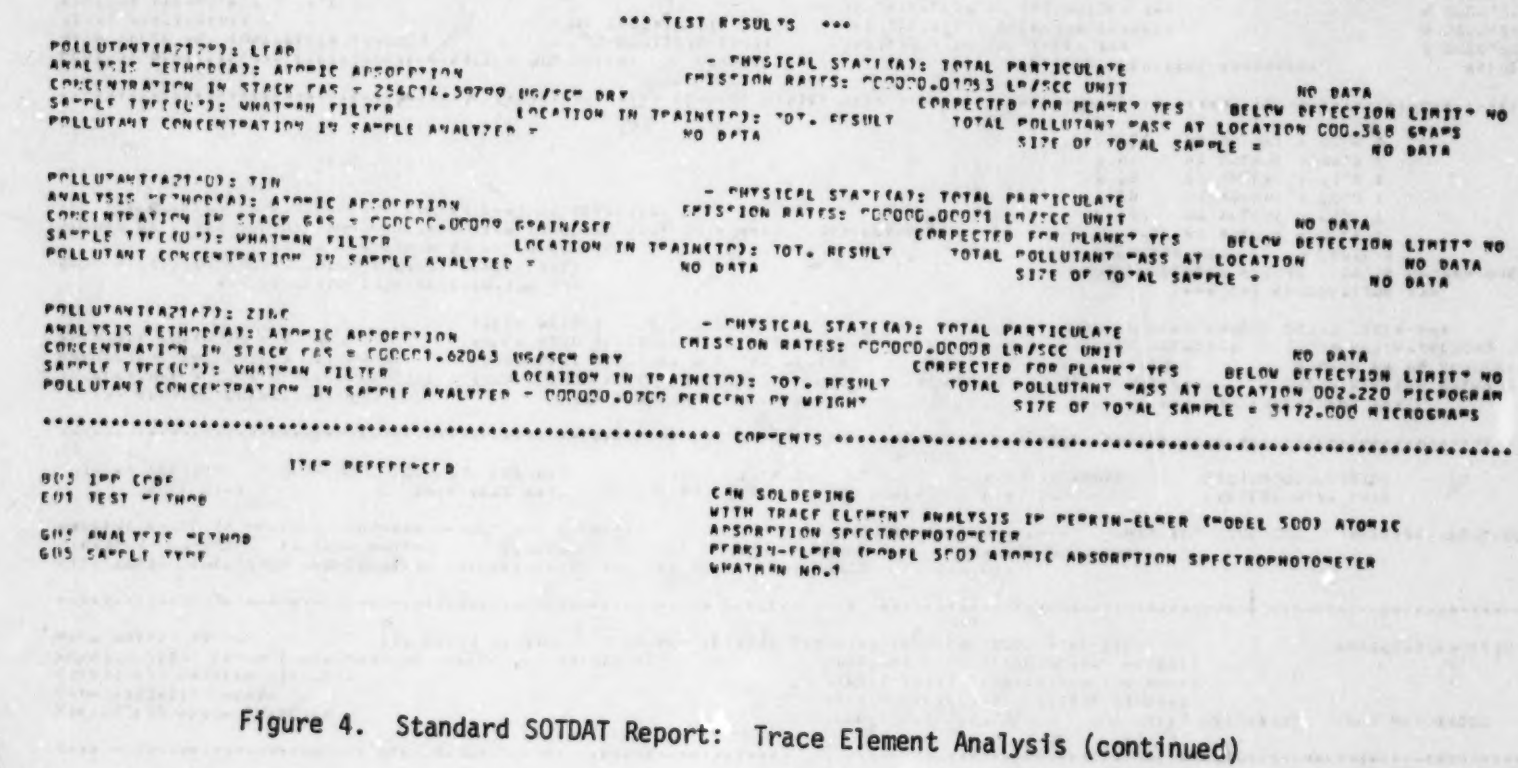


```
                                        *** TEST RESULTS ***

POLLUTANT(P2101): CARBON MONOXIDE
ANALYSIS METHOD(6): GAS CHROMATOGRAPHY                    - PHYSICAL STATE(8): GASEOUS
CONCENTRATION IN STACK GAS = 002000.00000 PPM DRY         EMISSION RATES:
                                                                    LB/SCC UNIT                    NO DATA
SAMPLE TYPE(69): FLEX. GRAB SAMPLE        LOCATION IN TRAIN(70): TOT. RESULT      CORRECTED FOR BLANK*      BELOW DETECTION LIMIT*
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED *                NO DATA                 TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                                                                    SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(P1C1): TOTAL HYDROCARBON
ANALYSIS METHOD(6): GAS CHROMATOGRAPHY                    - PHYSICAL STATE(8): GASEOUS
CONCENTRATION IN STACK GAS = 000020.00000 PPM DRY         EMISSION RATES:
                                                                    LB/SCC UNIT                    NO DATA
SAMPLE TYPE(69): FLEX. GRAB SAMPLE        LOCATION IN TRAIN(70): TOT. RESULT      CORRECTED FOR BLANK*      BELOW DETECTION LIMIT*
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED *                NO DATA                 TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                                                                    SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(P2C43): PROPANE
ANALYSIS METHOD(6): GAS CHROMATOGRAPHY                    - PHYSICAL STATE(8): GASEOUS
CONCENTRATION IN STACK GAS = 000010.00000 PPM DRY         EMISSION RATES:
                                                                    LB/SCC UNIT                    NO DATA
SAMPLE TYPE(69): FLEX. GRAB SAMPLE        LOCATION IN TRAIN(70): TOT. RESULT      CORRECTED FOR BLANK*      BELOW DETECTION LIMIT*
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED *                NO DATA                 TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                                                                    SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(P5C02): FORMALDEHYDE
ANALYSIS METHOD(6): GAS CHROMATOGRAPHY                    - PHYSICAL STATE(8): GASEOUS
CONCENTRATION IN STACK GAS = 000000.00403 GRAIN/SCF       EMISSION RATES:
                                                                    LB/SCC UNIT                    NO DATA
SAMPLE TYPE(69): FLEX. GRAB SAMPLE        LOCATION IN TRAIN(70): TOT. RESULT      CORRECTED FOR BLANK*      BELOW DETECTION LIMIT*
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED *                NO DATA                 TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                                                                    SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(P2C11): BENZENE
ANALYSIS METHOD(6): GAS CHROMATOGRAPHY                    - PHYSICAL STATE(8): GASEOUS
CONCENTRATION IN STACK GAS = 000020.00000 PPM DRY         EMISSION RATES:
                                                                    LB/SCC UNIT                    NO DATA
SAMPLE TYPE(69): FLEX. GRAB SAMPLE        LOCATION IN TRAIN(70): TOT. RESULT      CORRECTED FOR BLANK*      BELOW DETECTION LIMIT*
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED *                NO DATA                 TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                                                                    SIZE OF TOTAL SAMPLE =          NO DATA
********************************************************** COMMENTS **********************************************************

          ITEM REFERENCED

BOX IPP CODE                                  PRODUCTION OF PALTIC ANHYDRIDE BY CATALYTIC OXIDATION OF BENZENE
C03 TEST RUN NUMBER                           RUN NUMBER 7 AT INLET
E01 TEST METHOD                               MYLAR BAG
603 ANALYSIS METHOD                           EPA DRAFT BENZENE METHOD
606 POLLUTANT CONCENTRATION IN STACK GAS      CARD 1 AS BENZENE
606 POLLUTANT CONCENTRATION IN STACK GAS      CARD 7 GREATER THAN 2000
606 POLLUTANT CONCENTRATION IN STACK GAS      CARD 6 AS PROPANE
X09 GENERAL COMMENT                           CONCURRENT OUTLET TESTS ON FORM A92344
```

Figure 3. Standard SOTDAT Report: Typical Source Test (continued)

```
                                S T A N D A R D   S O T D A T   R E P O R T                    DATE  11/15/79   RECORD NO.  0003

                                        FORM NUMBER:  A12347

**********SOURCE IDENTIFICATION**********     **********TEST DESCRIPTION**********

STATE(34): NORTH CAROLINA                                          REPORT NO: 17-ABC-6      RUN DATE: 09/07/74      RUN NO: 0001A
COUNTY(119): DURHAM CO                                             REASON TESTED(1): NSPS PREPARATION
AQCR(166): EASTERN PIEDMONT                                        TESTED BY(2): FEDERAL AGENCY CONTRACTOR
PLANT(4324):  TRACE ELEMENT EXAMPLE CO  12 SAMPLE ST  DURHAM NC    SPONSORING AGENCY/PROGRAM: NSPS-PIP
NEDS POINT: 01              ZIP CODE: 27711       SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC                  PH:(511)782-4700

********** PROCESS DATA **********

SIC(3411):  METAL CANS                                                              TPE(**)
SCC(3-99-020-99):   FABRICATED METALS   CAN MAKING OPNS     NOT CLASSIFIED      SIC COMMENT    **
PROCESS RATE IN UNITS OF TONS PRODUCT                                  DESIGN CAPACITY=0002.000    THIS RUN=0002.400    AVERAGE=0002.500

        FUEL TYPE                FUEL FEED RATE      SULFUR     ASH      NITROGEN      HEAT CONTENT        PROCESS HEAT RATE
(  ):NO DATA                          NO DATA            %        %          %            NO DATA                NO DATA

********** SAMPLING ENVIRONMENT AND CONDITIONS **********

   *** AMBIENT CONDITIONS ***              *** STACK/DUCT GEOMETRY ***                    *** GAS PARAMETERS ***
TEMPERATURE = 21.0 DEGREES CELSIUS   (1)CIRCULAR    CROSS SECTION = 0000.04 SQ.METERS    GAS TEMPERATURE    = 040.6 DEGREES CELSIUS
BAROMETRIC PRESSURE = 761.00 MM HG   EQUIVALENT DIAMETER = 00.22 METERS                  GAS PRESSURE       =  0756.2 MM HG ABSOLUTE
RELATIVE HUMIDITY = 70.0 %           ANGLE WITH VERTICAL =  00 DEGREES                 AVERAGE VELOCITY   = 13.05 METERS/SECOND
                                     STACK HEIGHT = 0011 METERS                        AVERAGE FLOW RATE = 00026  SCMM-DRY

          *** SAMPLING SITE DESCRIPTION ***                                                  *** GAS COMPOSITION ***
SITE DESCRIPTION(00): DUCT NEAR PROCESS OUTLET                                          DRY MOLECULAR WEIGHT = 28.86 GM./GM-MOLE
                      FOLDER LINE NO. 3 WIPED VENT                                       % EXCESS AIR       =          %
NUMBER OF STACK EQUIVALENT DIAMETERS FROM SAMPLING SITE TO NEAREST DISTURBANCE--          % WATER BY VOLUME = 01.3 %
     UPSTREAM: 10 DIAMETERS,  DOWNSTREAM: 02 DIAMETERS                                   % CO2   BY VOLUME = 00.5 %
                                                                                         % CO    BY VOLUME = 00.0 %
                                                                                         % O2    BY VOLUME = 19.6 %
                                                                                         % N     BY VOLUME = 79.9 %
                                                                                         % ***   BY VOLUME =      %

********** CONTROL DEVICE DATA **********

CONTROL DEVICE(000): NO EQUIPMENT                          DOWNSTREAM                          DESIGN OPERATING PARAMETER              VALUE
MAIN POLLUTANT CONTROLLED(  ):                        PHYSICAL STATE      (  )NO DATA                                                =
UNDEFINED                                  - NO DATA                      (  )NO DATA                                                =
CONTROL EFFICIENCY =       %                                              (  )NO DATA                                                =
YEAR INSTALLED = 19                                                       (  )NO DATA                                                =
DESIGN FLOW RATE =          ACTUAL CUBIC METERS PER MINUTE                (  )NO DATA                                                =

********** TEST NUMBER 1 **********

                                        *** TEST METHOD DATA ***

TEST METHOD(51): EPA METHOD 5 WITH IMPINGERS                       NUMBER OF TRAVERSE POINTS SAMPLED THIS RUN = 001
AVERAGE METER TEMPERATURE = 024 DEG.CELSIUS                        AVERAGE % ISOKINETIC SAMPLING = 099.70 %
HOURS FROM START TO END ANALYSIS = 000                             SAMPLING TIME = 060 MINUTES
TOTAL VOLUME SAMPLED = 01.37 STANDARD CUBIC METERS                 SAMPLING FLOW RATE =  .0229D STANDARD CUBIC METERS/MINUTE
```

Figure 4. Standard SOTDAT Report: Trace Element Analysis



```
                                        *** TEST RESULTS ***

POLLUTANT(A2127): LEAD
ANALYSIS METHOD(A): ATOMIC ABSORPTION                    - PHYSICAL STATE(A): TOTAL PARTICULATE
CONCENTRATION IN STACK GAS = 256014.59799 UG/SCM DRY     EMISSION RATES: 000000.01053 LB/SEC UNIT          NO DATA
SAMPLE TYPE(U): WHATMAN FILTER          LOCATION IN TRAIN(TR): TOT. RESULT    CORRECTED FOR BLANK? YES    BELOW DETECTION LIMIT? NO
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED =             TOTAL POLLUTANT MASS AT LOCATION 000.348 GRAMS
                                NO DATA                  SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(A2140): TIN
ANALYSIS METHOD(A): ATOMIC ABSORPTION                    - PHYSICAL STATE(A): TOTAL PARTICULATE
CONCENTRATION IN STACK GAS = 000000.00009 GRAIN/SCF      EMISSION RATES: 000000.00001 LB/SEC UNIT          NO DATA
SAMPLE TYPE(U): WHATMAN FILTER          LOCATION IN TRAIN(TR): TOT. RESULT    CORRECTED FOR BLANK? YES    BELOW DETECTION LIMIT? NO
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED =             TOTAL POLLUTANT MASS AT LOCATION          NO DATA
                                NO DATA                  SIZE OF TOTAL SAMPLE =          NO DATA

POLLUTANT(A2147): ZINC
ANALYSIS METHOD(A): ATOMIC ABSORPTION                    - PHYSICAL STATE(A): TOTAL PARTICULATE
CONCENTRATION IN STACK GAS = 000001.62043 UG/SCM DRY     EMISSION RATES: 000000.00008 LB/SEC UNIT          NO DATA
SAMPLE TYPE(U): WHATMAN FILTER          LOCATION IN TRAIN(TR): TOT. RESULT    CORRECTED FOR BLANK? YES    BELOW DETECTION LIMIT? NO
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED = 000000.0705 PERCENT BY WEIGHT    TOTAL POLLUTANT MASS AT LOCATION 002.220 PICOGRAM
                                                         SIZE OF TOTAL SAMPLE = 3172.000 MICROGRAMS

********************************************************** COMMENTS **********************************************************

                ITEM REFERENCED

BOJ IPP CODE
EOJ TEST METHOD                                          CAN SOLDERING
                                                         WITH TRACE ELEMENT ANALYSIS IP PERKIN-ELMER (MODEL 5000) ATOMIC
GOS ANALYSIS METHOD                                      ABSORPTION SPECTROPHOTOMETER
GOS SAMPLE TYPE                                          PERKIN-ELMER (MODEL 5000) ATOMIC ABSORPTION SPECTROPHOTOMETER
                                                         WHATMAN NO.1
```

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Figure 4. Standard SOTDAT Report: Trace Element Analysis (continued)

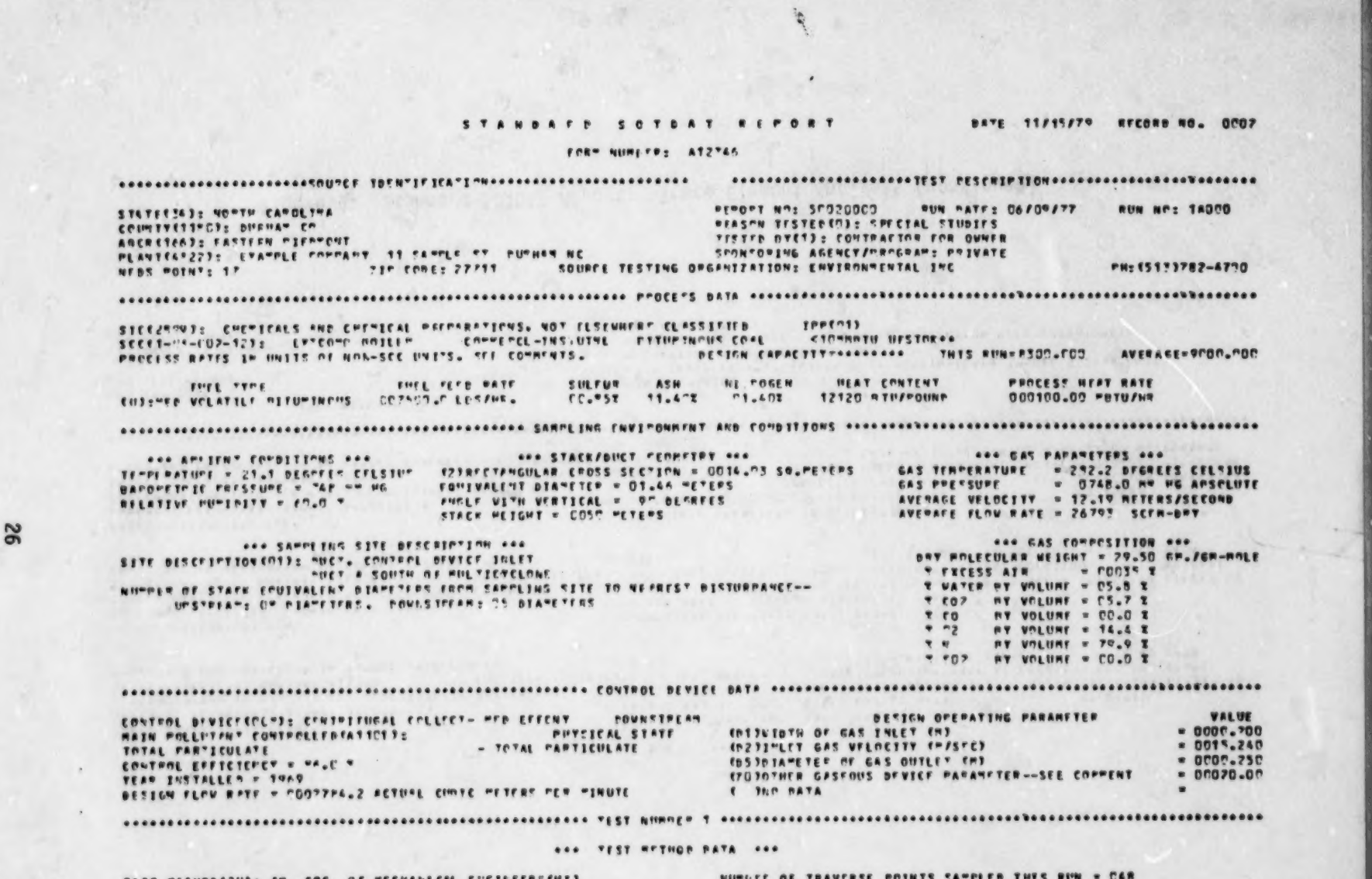
S T A N D A R D S O T D A T R E P O R T
DATE 11/15/79 RECORD NO. 0007
FORM NUMBER: A12746
SOURCE IDENTIFICATION
TEST DESCRIPTION
STATE(36): NORTH CAROLINA
COUNTY(119): DURHAM CO
AREA(166): EASTERN PIEDMONT
PLANT(4227): EXAMPLE COMPANY 11 SAMPLE ST DURHAM NC
REPORT NO: SP020003 RUN DATE: 06/09/77 RUN NO: 18000
REASON TESTED(3): SPECIAL STUDIES
TESTED BY(1): CONTRACTOR FOR OWNER
SPONSORING AGENCY/PROGRAM: PRIVATE
NEDS POINT: 17 ZIP CODE: 27711 SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC PH:(5113)782-4720
PROCESS DATA
SIC(2899): CHEMICALS AND CHEMICAL PREPARATIONS, NOT ELSEWHERE CLASSIFIED (PPE(01)
SCC(1-01-002-12): EXTERNAL BOILER COMBUSTION-INDUSTRIAL BITUMINOUS COAL <10MMBTU UFSTOKER
PROCESS RATES IN UNITS OF NON-SCC UNITS. SEE COMMENTS. DESIGN CAPACITY********** THIS RUN=P300.000 AVERAGE=P000.000
FUEL TYPE FUEL FEED RATE SULFUR ASH NITROGEN HEAT CONTENT PROCESS HEAT RATE
(01):MED VOLATILE BITUMINOUS 002500.0 LBS/HR. 00.05% 11.40% 01.40% 12120 BTU/POUND 000100.00 MBTU/HR
SAMPLING ENVIRONMENT AND CONDITIONS
*** AMBIENT CONDITIONS ***
TEMPERATURE = 21.1 DEGREES CELSIUS
BAROMETRIC PRESSURE = 748 MM HG
RELATIVE HUMIDITY = 60.0 %
*** STACK/DUCT GEOMETRY ***
(2)RECTANGULAR CROSS SECTION = 0014.03 SQ.METERS
EQUIVALENT DIAMETER = 01.44 METERS
ANGLE WITH VERTICAL = 0? DEGREES
STACK HEIGHT = 0050 METERS
*** GAS PARAMETERS ***
GAS TEMPERATURE = 292.2 DEGREES CELSIUS
GAS PRESSURE = 0748.0 MM HG ABSOLUTE
AVERAGE VELOCITY = 12.19 METERS/SECOND
AVERAGE FLOW RATE = 26797 SCFM-DRY
*** SAMPLING SITE DESCRIPTION ***
SITE DESCRIPTION(01): DUCT, CONTROL DEVICE INLET
DUCT A SOUTH OF MULTICYCLONE
NUMBER OF STACK EQUIVALENT DIAMETERS FROM SAMPLING SITE TO NEAREST DISTURBANCE--
UPSTREAM: 0? DIAMETERS. DOWNSTREAM: 05 DIAMETERS
*** GAS COMPOSITION ***
DRY MOLECULAR WEIGHT = 29.50 GM./GM-MOLE
% EXCESS AIR = 00035 %
% WATER BY VOLUME = 05.8 %
% CO2 BY VOLUME = 05.7 %
% CO BY VOLUME = 00.0 %
% O2 BY VOLUME = 14.4 %
% N BY VOLUME = 79.9 %
% SO2 BY VOLUME = 00.0 %
CONTROL DEVICE DATA
CONTROL DEVICE(01): CENTRIFUGAL COLLECT- PER EFFENT DOWNSTREAM
MAIN POLLUTANT CONTROLLED(A1CT): PHYSICAL STATE
TOTAL PARTICULATE - TOTAL PARTICULATE
CONTROL EFFICIENCY = **.0 %
YEAR INSTALLED = 1969
DESIGN FLOW RATE = 00077?6.2 ACTUAL CUBIC METERS PER MINUTE
DESIGN OPERATING PARAMETER VALUE
(01)WIDTH OF GAS INLET (M) = 0000.?00
(02)INLET GAS VELOCITY (M/SEC) = 0015.240
(03)DIAMETER OF GAS OUTLET (M) = 0000.250
(?0)OTHER GASEOUS DEVICE PARAMETER--SEE COMMENT = 000?0.00
(INP DATA =
TEST NUMBER 1
*** TEST METHOD DATA ***
TEST METHOD(20): 5?, ?PE. OF MECHANICAL EFFICIENCY(?)
AVERAGE METER TEMPERATURE = 0?5 DEG.CELSIUS
HOURS FROM START TO END ANALYSIS = ???
TOTAL VOLUME SAMPLED = 01.6? STANDARD CUBIC METER
NUMBER OF TRAVERSE POINTS SAMPLED THIS RUN = 048
AVERAGE % ISOKINETIC SAMPLING = 107.?0 %
SAMPLING TIME = 120 MINUTES
SAMPLING FLOW RATE = .0??0 STANDARD CUBIC METERS/MINUTE

Figure 5. Standard SOTDAT Report: Particle Size Test

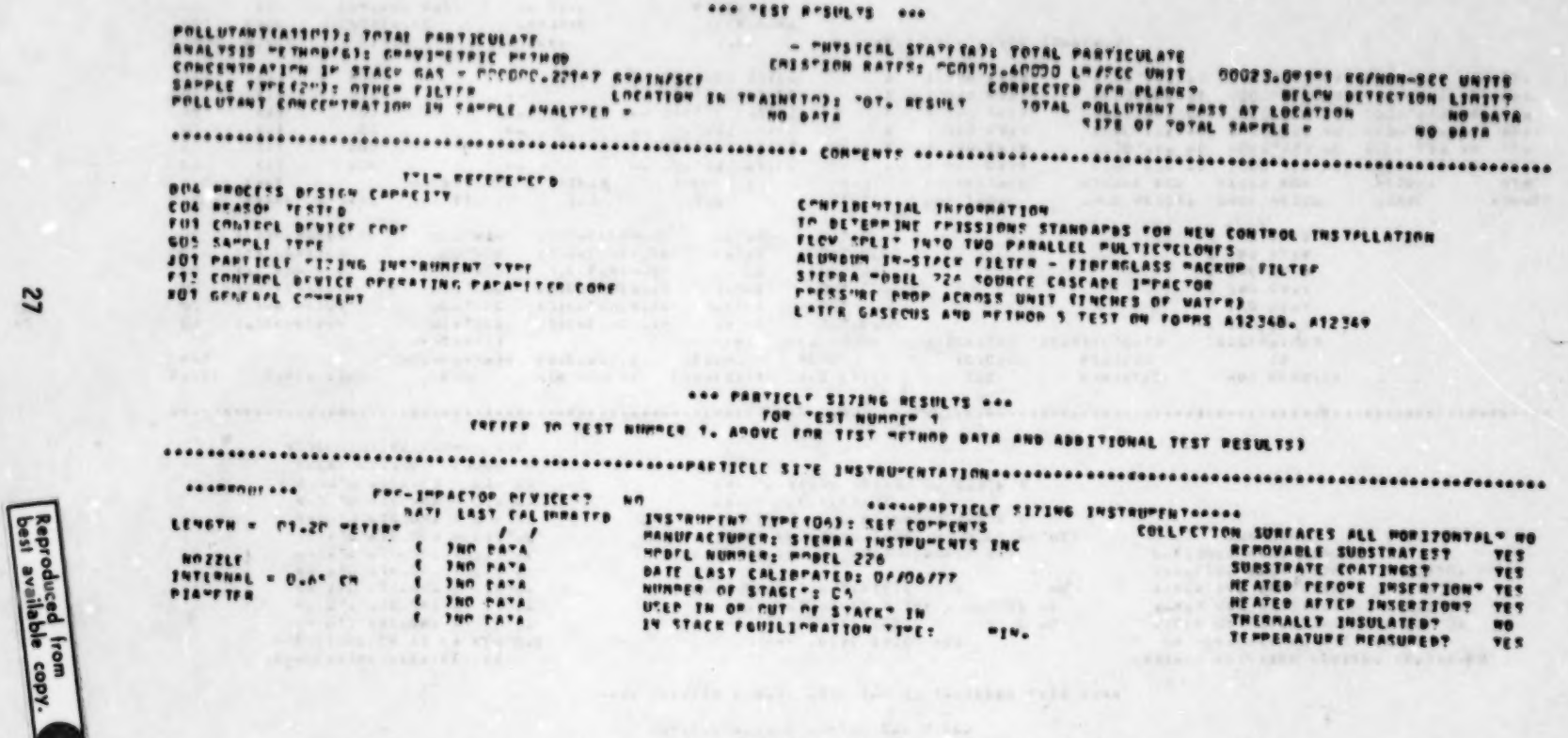
*** TEST RESULTS ***
POLLUTANT(S)(1): TOTAL PARTICULATE
ANALYSIS METHOD(S): GRAVIMETRIC METHOD
CONCENTRATION IN STACK GAS = 0.00000.22947 GRAINS/SCF
SAMPLE TYPE(2): OTHER FILTER
POLLUTANT CONCENTRATION IN SAMPLE ANALYZED =
- PHYSICAL STATE(S): TOTAL PARTICULATE
EMISSION RATES: 0.00173.40000 LB/SEC UNIT 00023.0010 KG/NON-SEC UNITS
CORRECTED FOR PLANT BELOW DETECTION LIMIT?
LOCATION IN TRAIN(S): %T. RESULT NO DATA
TOTAL POLLUTANT MASS AT LOCATION NO DATA
SIZE OF TOTAL SAMPLE = NO DATA
COMMENTS
TYPE REFERENCED
BD4 PROCESS DESIGN CAPACITY
CD4 REASON TESTED
FU1 CONTROL DEVICE CODE
GD5 SAMPLE TYPE
JD1 PARTICLE SIZING INSTRUMENT TYPE
PI2 CONTROL DEVICE OPERATING PARAMETER CODE
RD1 GENERAL COMMENT
CONFIDENTIAL INFORMATION
TO DETERMINE EMISSIONS STANDARDS FOR NEW CONTROL INSTALLATION
FLOW SPLIT INTO TWO PARALLEL MULTICYCLONES
ALUNDUM IN-STACK FILTER - FIBERGLASS BACKUP FILTER
STERRA MODEL 228 SOURCE CASCADE IMPACTOR
PRESSURE DROP ACROSS UNIT (INCHES OF WATER)
LATER GASEOUS AND METHOD 5 TEST ON FORMS A12348, A12349
*** PARTICLE SIZING RESULTS ***
FOR TEST NUMBER 1
(REFER TO TEST NUMBER 1, ABOVE FOR TEST METHOD DATA AND ADDITIONAL TEST RESULTS)
PARTICLE SIZE INSTRUMENTATION
PRE-IMPACTOR DEVICES? NO
DATE LAST CALIBRATED
/ /
LENGTH = 01.20 METERS
NOZZLE
INTERNAL = 0.45 CM
DIAMETER
( ) NO DATA
( ) NO DATA
( ) NO DATA
( ) NO DATA
( ) NO DATA
PARTICLE SIZING INSTRUMENT
INSTRUMENT TYPE(DA): SEE COMMENTS
MANUFACTURER: STERRA INSTRUMENTS INC
MODEL NUMBER: MODEL 226
DATE LAST CALIBRATED: 04/06/77
NUMBER OF STAGES: 04
USED IN OR OUT OF STACK? IN
IN STACK EQUILIBRATION TIME: MIN.
COLLECTION SURFACES ALL HORIZONTAL? NO
REMOVABLE SUBSTRATES? YES
SUBSTRATE COATINGS? YES
HEATED BEFORE INSERTION? YES
HEATED AFTER INSERTION? YES
THERMALLY INSULATED? NO
TEMPERATURE MEASURED? YES

Figure 5. Standard SOTDAT Report: Particle Size Test (continued)

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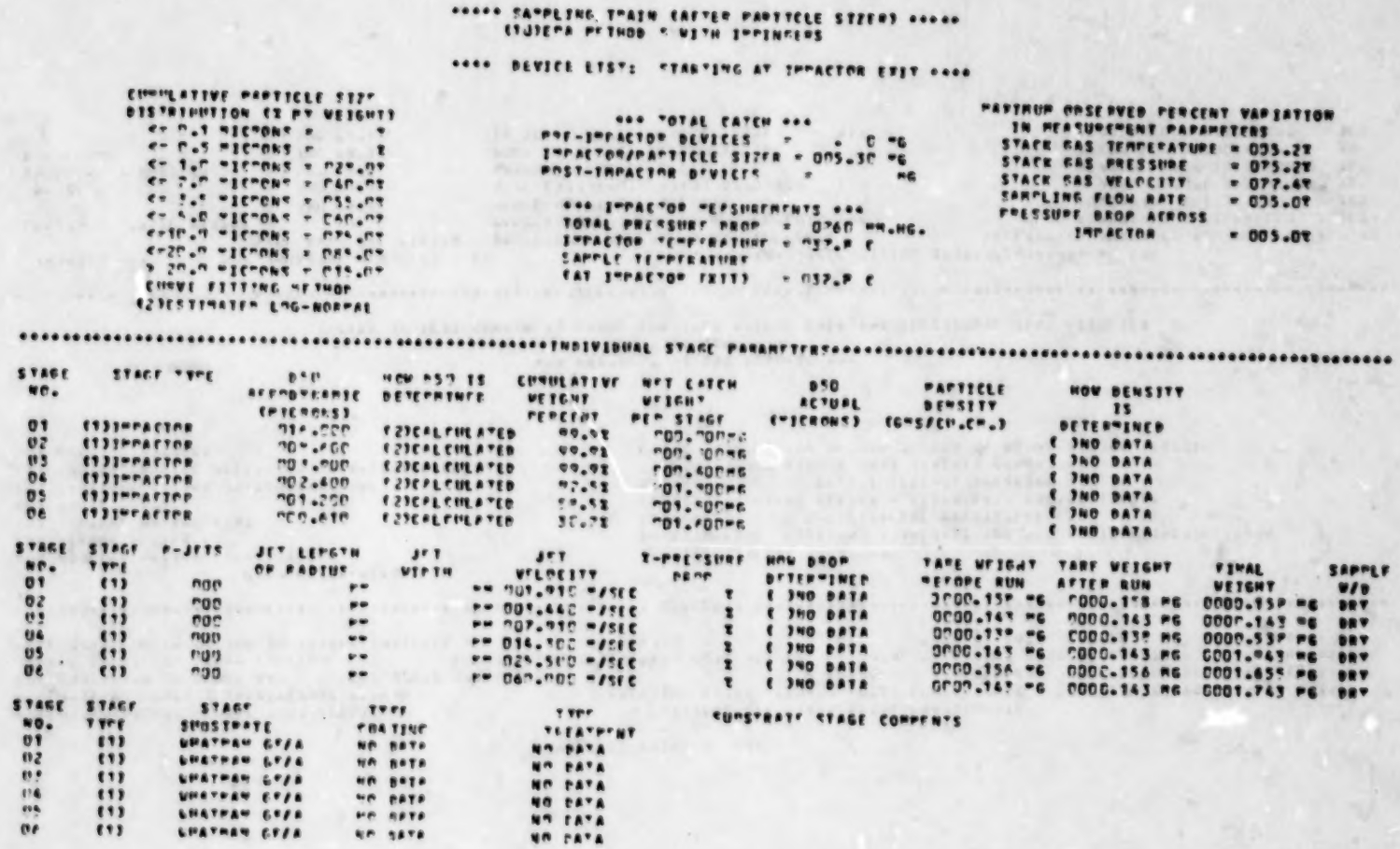

***** SAMPLING TRAIN (AFTER PARTICLE SIZER) *****
(EPA METHOD 5 WITH IMPINGERS

**** DEVICE LIST: (STARTING AT IMPACTOR EXIT ****

CUMULATIVE PARTICLE SIZE DISTRIBUTION (% BY WEIGHT)
<= 0.1 MICRONS = *
<= 0.5 MICRONS = %
<= 1.0 MICRONS = 02*.0%
<= 2.0 MICRONS = 040.0%
<= 3.0 MICRONS = 055.0%
<= 5.0 MICRONS = 060.0%
<=10.0 MICRONS = 094.0%
<=20.0 MICRONS = 098.0%
> 20.0 MICRONS = 010.0%
CURVE FITTING METHOD
(2)ESTIMATED LOG-NORMAL

*** TOTAL CATCH ***
PRE-IMPACTOR DEVICES = .0 MG
IMPACTOR/PARTICLE SIZER = 005.30 MG
POST-IMPACTOR DEVICES = MG

*** IMPACTOR MEASUREMENTS ***
TOTAL PRESSURE DROP = 0760 MM.HG.
IMPACTOR TEMPERATURE = 037.0 F
SAMPLE TEMPERATURE AT IMPACTOR EXIT) = 032.0 F

MAXIMUM OBSERVED PERCENT VARIATION IN MEASUREMENT PARAMETERS
STACK GAS TEMPERATURE = 035.2%
STACK GAS PRESSURE = 075.2%
STACK GAS VELOCITY = 077.4%
SAMPLING FLOW RATE = 035.0%
PRESSURE DROP ACROSS IMPACTOR = 005.0%

**********INDIVIDUAL STAGE PARAMETERS**********

STAGE NO.	STAGE TYPE	D50 AERODYNAMIC (MICRONS)	HOW D50 IS DETERMINED	CUMULATIVE WEIGHT PERCENT	NET CATCH WEIGHT PER STAGE	D50 ACTUAL (MICRONS)	PARTICLE DENSITY (GMS/CU.CM.)	HOW DENSITY IS DETERMINED
01	(1)IMPACTOR	010.000	(2)CALCULATED	00.0%	000.0000G			( )NO DATA
02	(1)IMPACTOR	005.000	(2)CALCULATED	00.0%	000.0000G			( )NO DATA
03	(1)IMPACTOR	001.000	(2)CALCULATED	00.0%	000.4000G			( )NO DATA
04	(1)IMPACTOR	002.600	(2)CALCULATED	02.0%	001.9000G			( )NO DATA
05	(1)IMPACTOR	001.200	(2)CALCULATED	00.0%	001.9000G			( )NO DATA
06	(1)IMPACTOR	000.610	(2)CALCULATED	30.0%	001.4000G			( )NO DATA

STAGE NO.	STAGE TYPE	P-JETS	JET LENGTH OR RADIUS	JET WIDTH	JET VELOCITY	% PRESSURE DROP	HOW DROP DETERMINED	TARE WEIGHT BEFORE RUN	TARE WEIGHT AFTER RUN	FINAL WEIGHT	SAMPLE W/D
01	(1)	000	**		** 001.910 */SEC	%	( )NO DATA	0000.150 MG	0000.178 MG	0000.150 MG	DRY
02	(1)	000	**		** 001.440 */SEC	%	( )NO DATA	0000.143 MG	0000.143 MG	0000.143 MG	DRY
03	(1)	000	**		** 007.910 */SEC	%	( )NO DATA	0000.139 MG	0000.139 MG	0000.539 MG	DRY
04	(1)	000	**		** 016.700 */SEC	%	( )NO DATA	0000.143 MG	0000.143 MG	0001.043 MG	DRY
05	(1)	000	**		** 025.500 */SEC	%	( )NO DATA	0000.156 MG	0000.143 MG	0001.655 MG	DRY
06	(1)	000	**		** 060.000 */SEC	%	( )NO DATA	0000.143 MG	0000.143 MG	0001.743 MG	DRY

STAGE NO.	STAGE TYPE	SUBSTRATE	TYPE COATING	TYPE TREATMENT
01	(1)	UNATTAK GF/A	NO DATA	NO DATA
02	(1)	UNATTAK GF/A	NO DATA	NO DATA
03	(1)	UNATTAK GF/A	NO DATA	NO DATA
04	(1)	UNATTAK GF/A	NO DATA	NO DATA
05	(1)	UNATTAK GF/A	NO DATA	NO DATA
06	(1)	UNATTAK GF/A	NO DATA	NO DATA

SUBSTRATE STAGE COMMENTS

Figure 5. Standard SOTDAT Report: Particle Size Test (continued)

Abbreviated SOTDAT Report

The Abbreviated SOTDAT Report (Figure 6) consists of the first few lines of identifying information from the Standard Report and a list of the pollutants tested in each test run. This Report was designed to allow users to survey the results of a set of select/sort criteria in condensed form prior to requesting full Standard Reports for desired test runs.

```
SOTDAT  PLANT  NAME  AND  ADDRESS  LISTING        DATE 11/15/79   RECORD NO.  0001
                    FORM NUMBER:  A12345

STATE(36): NORTH CAROLINA                                  REPORT NO: 12-ABC-1     RUN DATE: 03/21/78     RUN NO: 0A001
COUNTY(119): DURHAM CO                                     REASON TESTED(1): NSPS PREPARATION
AQCR(104): EASTERN PIEDMONT                                TESTED BY(7): FEDERAL AGENCY CONTRACTOR
PLANT(4321):  EXAMPLE PLANT  1, SAMPLE ST  DURHAM NC       MONITORING AGENCY/PROGRAM: EPA  ADPS
NEDS POINT: 1                ZIP CODE: 27711       SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC          PH:(919)782-4700
POLLUTANTS TESTED:  021201P  021101W  032704W  045021W  054201W

SOTDAT  PLANT  NAME  AND  ADDRESS  LISTING        DATE 11/15/79   RECORD NO.  0002
                    FORM NUMBER:  A12346

STATE(34): NORTH CAROLINA                                  REPORT NO: 50626950     RUN DATE: 06/09/77     RUN NO: 1AGCD
COUNTY(119): DURHAM CO                                     REASON TESTED(1): SPECIAL STUDIES
AQCR(104): EASTERN PIEDMONT                                TESTED BY(1): CONTRACTOR FOR OWNER
PLANT(4322):  EXAMPLE COMPANY  11 SAMPLE ST  DURHAM NC     MONITORING AGENCY/PROGRAM: PRIVATE
NEDS POINT: 17               ZIP CODE: 27711       SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC          PH:(919)782-4700
POLLUTANTS TESTED:  A11216

SOTDAT  PLANT  NAME  AND  ADDRESS  LISTING        DATE 11/15/79   RECORD NO.  0003
                    FORM NUMBER:  A12347

STATE(36): NORTH CAROLINA                                  REPORT NO: 12-ABC-4     RUN DATE: 09/03/74     RUN NO: 0001A
COUNTY(119): DURHAM CO                                     REASON TESTED(1): NSPS PREPARATION
AQCR(104): EASTERN PIEDMONT                                TESTED BY(7): FEDERAL AGENCY CONTRACTOR
PLANT(4323):  TRACE ELEMENT EXAMPLE CO  17 SAMPLE ST  DURHAM NC   MONITORING AGENCY/PROGRAM: NADP-NTP
NEDS POINT: 1                ZIP CODE: 27711       SOURCE TESTING ORGANIZATION: ENVIRONMENTAL INC          PH:(919)782-4700
POLLUTANTS TESTED:  A21201A  A2160CA  A2147A
```

Figure 6. Abbreviated SOTDAT Report

SOTDAT Emission Factor Report

The Emission Factor Report (Figure 7) computes an average emission factor (in lbs. per SCC unit) and associated statistics for tests of processes having a specific Source Classification Code and a test result for the desired pollutant. Qualifying test runs are previously selected from SOTDAT using the Select/Sort Program and approved by the user as applicable. The user can also specify weights to be given to specific test runs in computation of the emission factor.

```
                                    SOTDAT EMISSION FACTOR REPORT

  1 POLLUTANT SELECTIONS WERE READ.
  1 POLLUTANT SELECTIONS WERE ACCEPTED.
  0 SELECTIONS WERE IGNORED DUE TO ABSENCE OF POLLUTANT SELECTION SPECIFICATION.
********************************************** SUMMARY OF TEST RESULTS USED IN COMPUTATIONS **********************************

 AFDS POINT ID                    SCC RATE    AVERAGE STACK GAS
ST CNTY PLNT PT      SCC          THIS RUN         FLOW RATE        POLLUTANT     CONCENTRATION IN STACK GAS     EMISSIONS      FORM
26-1680-0003-     10100202      237.700    * ***  SCFM-DRY        A-TSP -6       0.05400 GRAIN/SCF          LB/SCC UNIT    NUMBER WEIGHT
26-1680-0003-     10100202      237.700    *****  SCFM-DRY        A-TSP -6       0.20000 GRAIN/SCF             3.00000     A00133   02
26-1680-0003-     10100202      229.700    *****  SCFM-DRY        A-TSP -6       0.17600 GRAIN/SCF             1.00000     A00134   03
*** END OF SOT-SUBFILE.                                                                                        3.00000     A00135   01*

NOTE:  SCC UNITS USED IN THIS COMPUTATION ARE  TONS BURNED                                                          ALL RESULTS IN OTHER UNITS ARE REJECTED.
*** FOOTNOTE:  WEIGHTING VALUES MARKED WITH ASTERISK WERE BLANK ON CARD - ASSUMED EQUAL TO ONE.


************************************************************ RESULTS OF EMISSION FACTOR ANALYSIS ***********************************
                                    3 = NUMBER OF TEST RESULTS FOR EMISSION RATE USED IN COMPUTATION
                                2.33333 = ARITHMETIC MEAN OF TEST RESULTS (LB/SCC UNIT)
                                1.15469 = STANDARD DEVIATION OF TEST RESULTS (LB/SCC UNIT)
                                3.00000 = MAXIMUM TEST RESULT (LB/SCC UNIT)
                                1.00000 = MINIMUM TEST RESULT (LB/SCC UNIT)
                                1.05818 = ARITHMETIC MEAN OF TEST RESULTS (KG/SCC UNIT)
                                0.52375 = STANDARD DEVIATION OF TEST RESULTS (KG/SCC UNIT)
                                1.36077 = MAXIMUM TEST RESULT (KG/SCC UNIT)
                                0.45359 = MINIMUM TEST RESULT (KG/SCC UNIT)

                                          *** WEIGHTED COMPUTATIONS ***
                                2.00000 = WEIGHTED MEAN OF TEST RESULTS (LB/SCC UNIT)
                                1.22474 = STANDARD DEVIATION OF TEST RESULTS ABOUT THE WEIGHTED MEAN (LB/SCC UNIT)
                                1.09544 = WEIGHTED DEVIATION OF TEST RESULTS ABOUT THE WEIGHTED MEAN (LB/SCC UNIT)
                                0.90718 = WEIGHTED MEAN OF TEST RESULTS (KG/SCC UNIT)
                                0.55553 = STANDARD DEVIATION OF TEST RESULTS ABOUT THE WEIGHTED MEAN (KG/SCC UNIT)
                                0.49688 = WEIGHTED DEVIATION OF TEST RESULTS ABOUT THE WEIGHTED MEAN (KG/SCC UNIT)



************************************************************ RUN SUMMARY ***********************************************************
    3 RECORDS WERE READ FROM SOT-SUBFILE.
    0 RECORDS FROM SOT-SUBFILE WERE IGNORED--INCONSISTENT SCC OR NO WEIGHTING CARD.
    3 RECORDS WERE ACCEPTED.
    4 FORM NUMBER WEIGHTING CARDS WERE READ.
    0 FORM NUMBER WEIGHTING CARDS WERE REJECTED.
    4 FORM NUMBER WEIGHTING CARDS WERE ACCEPTED.
    1 FORM NUMBERS WERE NOT FOUND IN SOT-SUBFILE.
    3 FORM NUMBERS WERE FOUND IN SOT-SUBFILE.
```

Figure 7. SOTDAT Emission Factor Report

Additional References

Other publications that supplement this booklet for SOTDAT as well as other AEROS data bases include:

1. AEROS Manual Series, Volume I: AEROS Overview, EPA-450/2-76-001. As the name implies, it presents and overview of the system.

2. AEROS Manual Services, Volume II: AEROS User's Manual, EPA-450/2-76-029. This manual describes data coding as well as the data flow procedures.

3. AEROS Manual Series, Volume III: Summary and Retrieval, EPA-450/2-76-009. This manual describes computerized reports as well as several examples of data analysis.

4. AEROS Manual Series, Volume V: AEROS Manual of Codes, EPA-450/2-76-005. This manual contains all necessary AEROS codes.

These manuals are available from the same sources as the publications related to source test data mentioned earlier.

Additional information can be obtained by communicating with:

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